

**Webinar: Introduction to the American Community Survey
August 12, 2020**

Coordinator: Good afternoon. Welcome and thank you for standing by. For the duration of today's conference, all participants will be in listen-only mode until the question-and-answer session. And at that time only, you may press Star 1. I would like to inform all parties that today's conference is being recorded. If you have any objections, you may disconnect at this time. I'll now turn the conference over to Caleb Hopler. Thank you. You may begin.

Caleb Hopler: Hi. Thank you. Good afternoon, everyone, or good morning to those of you on the West Coast. As stated by our operator, my name is Caleb Hopler, and I am a Survey Statistician in the Outreach and Education Branch within the American Community Survey Office here at the Census Bureau.

I want to thank you for attending today's webinar covering the introduction to the American Community Survey. Hopefully, I can enlighten you and further your understanding of the ACS, or the American Community Survey. Before I dive into the ACS itself, let's start with an overview about the U.S. Census Bureau as a whole. And yes, we do more than just count people.

The Census Bureau is actually the largest of 17 primary federal government statistical agencies. Now, during the decennial census, it is the second-largest employer in the US. While we're best known for the decennial census, or the census of population and housing every 10 years, like we're doing now, we also conduct more than 100 censuses and surveys of households and businesses across the nation each year.

This includes the American Community Survey, and more than 30 other household surveys. We also conduct over 60 economic programs. Of these,

the economic census is the biggest and most comprehensive. The Census Bureau's mission is to serve as the nation's leading provider of quality data about its people and economy. And our goal is to provide the best mix of timeliness, relevancy, quality and cost for the data we collect, and services that we provide. If you would like to know more about the U.S. Census Bureau, please visit www.census.gov and select about us.

So let's go over today's agenda regarding the ACS. The first part of today's webinar, I'll be going over the basics of the ACS, including the history of the survey, how the data are collected, the topics included, and the geographies covered. Next, I will discuss some of the tools available to help you access ACS data, followed by a live demonstration, how to find data using just a couple of these tools. And I'll also cover some resources available on our website for learning more about the survey before I reserve time at the end for questions.

So, starting off with the basics and the foundation of the ACS. The ACS is on the leading edge of survey design, continuous improvement, and data quality. It is the nation's most current, reliable and accessible data source for local statistics on critical planning topics. The survey samples approximately 3.5 million addresses each year. These data are collected continuously throughout the year to produce annual social, economic, housing, and demographic estimates.

The data collected through ACS is used to distribute more than \$675 billion of federal government spending each year. Our estimates, covering more than 40 topics, support more than 300 known federal users and countless non-federal users. Examples of some programs that use the Census Bureau data to determine funding, include the US Department of Agriculture, where they use Supplemental Nutrition Assistance Program and provide for the National

School Lunch Program, and the Special Supplemental Nutrition Program for Women, Infants and Children.

Also, the Department of Health and Human Services, providing the Medical Assistance Program, Temporary Assistance for Needy Families, and the Head Start Program. Also, the Department of Housing and Urban Development, for the Community Development BLOCK Grant Program, and Public Housing Capital Fund, and then also the Department of Transportation for the Highway Planning and Construction and Federal Transit Formula grants.

The Census Bureau releases three different sets of data estimates in regard to the ACS each year, in the form of one-year and five-year period data sets, as well as one-year supplemental estimates. I will discuss these data products in more detail on an upcoming slide. So in order to understand what the ACS is and why it even exists, we need to discuss a bit of census history.

The first census of the United States was conducted in 1790, and occurring every 10 years, with one form being used to collect data from all households, until 1930. Then from 1940 to 2000, the decennial census, which is the name for the census conducted every 10 years, was then contained to a - contained a short form used to collect data from all households. And then in addition, a long form that was used to collect data from only a sample of households.

The long form approach worked well initially, but the data became less and less current as the decade progressed after each decennial census. So then in the early 1990s, demand from a wide variety of users for current, nationally consistent data, led federal government policymakers to understand and then to consider the feasibility of collecting social, economic and housing data continuously throughout the decade.

So in 2000, a large scale demonstration of the American Community Survey was then conducted. The ACS was then fully implemented in 2005, and began collecting data for all of America's communities each year. There is also the Puerto Rico Community Survey, or the PRCS, which is the equivalent of the ACS in Puerto Rico.

In 2010 and moving forward, the decennial census is only a short form now sent to all households because the ACS now collects information each year that was once collected by the long form that was each decade.

So up to this point, I have mentioned the decennial census several times. So let's compare the ACS with the decennial census. ACS estimates are based on a sample of the population, whereas the census is based on the official count of the entire population. Every year, over 3.5 million housing unit addresses are contacted by the Census Bureau to participate in the ACS. The information obtained from this sample, is then used to estimate characteristics about the total population in a timely and cost-effective manner.

However, these estimates differ from those that would be obtained in a census where every household in the nation is contacted. So this results in an element of uncertainty in the ACS data. So as such, ACS estimates include a margin of error. You may also see that as MOE. So the margin of error gives us more information about the population, by telling us how much the estimate may vary from the true population value. But not to worry. We will talk about the margin of error or MOE later in this presentation.

So what does the ACS collect? The ACS collects information that was previously appearing on the census long form, collecting detailed social, economic, housing and demographic characteristics. Whereas the census collects basic demographics via the short form. So here we're talking age, sex,

race, Hispanic origin, household relationship, and housing tenure.

So what is produced? The ACS produces population and housing characteristics, whereas the census produces population and housing totals. And okay, how about new data? When is that available? The ACS occurs annually, reflecting a period of time over which the data are collected, averaging data for 12 months, the one-year estimates, or 60 months, the five-year estimates. Whereas the census occurs every 10 years and reflects a point in time, which is Census Day, April 1st.

You may be wondering, well, what method does the Census Bureau use to collect ACS data? The American Community Survey data collection operation uses three modes that take place over a three month period: internet, mail, and personal visit. For most housing units, the first phase of data collection includes an invitation for the household to respond via internet, which is mailed to the sample address.

Internet data collection started in 2013. So if the household does not respond via internet, a paper questionnaire is then sent to the sample house - sample address for the household to complete and return by mail. If the Census Bureau is unable to reach an occupant of the address via the internet or the paper questionnaire, or the unit had an un-mailable address, that address may be selected for computer-assisted personal interviewing, known as CAPI.

At any point in this process, receipt of an internet response or a completed paper questionnaire from the sample address, results in the address being removed from the data collection workload. Also, respondents are always able to call the telephone questionnaire assistance, or TQA line at any point during the three-month data collection cycle, if they have questions about the survey, or if they prefer to complete the survey over the phone.

The content collected by the American Community Survey, can be grouped into four main types of characteristics: social, demographic, economic, and housing. Social characteristics include topics such as education, marital status, fertility, veteran, disability status, place of birth, and others. The American Community Survey also collects basic demographic characteristics such as age, sex, race, and Hispanic origin. This is the same information that's collected on the decennial census.

Going further, the economic characteristics include such topics as employment status, income, commuting to work, occupation, industry, health insurance, and others. And finally, housing characteristics include topics such as tenure, information about occupancy, and the structure itself, which includes the home value, housing costs, includes the mortgage, taxes and insurance, utilities, plumbing, and kitchen facilities, and others.

Each question on the ACS is used for federal and state government programs. These topics are used to produce more than 1,000 tables for local communities. The ACS provides data for more geographies on an annual basis than any other household survey. Over 13,000 geographies for 1-year estimates, 15,000 geographies for 1-year supplemental estimates, and 776,000 geographies for 5-year estimates. That's a total of more than 805,000 geographic areas covered by the ACS.

The image on this slide, shows some of the geographies for which ACS data are produced, and the relationship between them. Lower geographic areas fit neatly within the larger areas, directly connected with lines. For example, school, congressional and State legislative districts, fit neatly within states, and do not cross the state boundaries. However, it may cross boundaries of counties or metropolitan areas.

In this visualization, you can see that the smallest geographic building block is the block group. The ACS's unique ability to report on a wide range of geographies is what gives it such a broad appeal. Covering a wide range of geographic areas, ACS data are the most commonly needed at the state, county, place, census tract, and block group geographic levels.

So this slide illustrates the relationship between these common geographic types, and how they are nested within one another. So for this example, we're going to look at El Paso, Texas. Census tracts are small statistical subdivisions within a county, with populations of 1,200 to 8,000 people. So, for census tracts, think small towns, rural areas and neighborhoods.

Block groups are a group of blocks within a census tract, with about 600 to 3,000 people, as you can see blown out at the top right corner of the screen - bottom right, excuse me. Again, ACS's unique ability to report on a wide range of geographies, is what gives it its broad appeal.

So now getting back to the ACS data products that I referenced earlier, these products are released about one year after the data are collected. The first year of data collection with a full sample was in 2005. ACS 1-year data estimates collected in 2019, are planned to be released on September 17, 2020. ACS 1-year estimates, which combine data collected over 12 months, are available for geographic areas with a population of 65,000 or more.

The ACS 1-year supplemental estimates are a subset of detailed tables that are available for geographic areas with populations of 20,000 or more. They are simplified versions of popular ACS tables, and provide the most current data to almost twice as many geographies, as compared to the standard 1-year release. We plan to release the 2019 ACS 1-year supplemental estimates on

October 15 of this year, 2020.

ACS 5-year estimates, which combine data collected over 60 months, are available for geographic areas of all sizes, down to the census tract and block group level. The 2015-2019 ACS five-year estimates, are planned to be released on December 10, 2020.

We also release 1-year and 5-year public use microdata samples, or PUMS files, for users who want to create custom tables and variance (replicant) estimates for users who want to calculate margins of error. So use the link on the slide to access our complete release schedule.

So I just covered the data products available. Now I want to show you how to access ACS data products. So we do cater to a variety of data users with unique needs. So we have a variety of data access tools. This is a list of a few of those tools. So QuickFacts provides selected statistics for all states and counties, and for cities and towns with a population of 5,000 or more, using the ACS, as well as other Census Bureau data sets, like the Population Estimates Program, the 2010 Census, County Business Patterns, Survey of Business Owners, Building Permit Survey, et cetera.

My Congressional District gives you quick and easy access to select the statistics collected by the ACS and by County Business Patterns. My Tribal Area gives you quick and easy access to selected ACS statistics for tribal areas. OnTheMap for Emergency Management provides data for disasters, natural hazards, and weather events using the ACS, as well as other Census Bureau data sets.

Census Business Builder provides selected demographic data from the ACS, and selected economic data from the U.S. Census Bureau, to help users start

or grow a business, or understand the business landscape for a region.

Data.census.gov is the Census Bureau's main data dissemination platform to access Census Bureau Statistics. This platform is the primary way to access data for the 2018 ACS, and releases moving forward. So that means the 2019 ACS release will be found here on data.census.gov.

Census COVID-19 Data Hub provides demographic and economic resources to assist communities concerning the current pandemic. TIGER/Line Shapefiles with selected demographic data, or topologically integrated geographic encoding and referencing shape files, are available pre-joined with ACS 5-year estimates in geodatabase format.

Application Programming Interface, or API, lets developers create custom apps to reach new users and make key demographic, socioeconomic, and housing statistics more accessible than ever before. All data tools are available from census.gov. Use the explore data tab from the blue ribbon at the top of the screen, and then click on the data tools and apps tab to view a comprehensive list of census tools and apps.

So to get into a little bit more detail about the different tools that I just gave a quick look into. So QuickFacts is a quick, easy way to access facts about people, business, and geography. QuickFacts provides statistics for all states, counties, cities and towns, with a population of 5,000 or more. So it's great for making quick comparisons between two geographies.

Some of the topics that you can compare are population, age and sex, housing, health, transportation, and others. And you can compare up to five geographies at once.

My Congressional District, or commonly referred to as My CD, gives you

quick and easy access to selected statistics from the ACS and from County Business Patterns.

County Business Patterns is an annual series that provides subnational economic data by industry. This series includes the number of establishments, employment, first quarter payroll, and annual payroll. So you can use My CD for information on congressional districts statistics on people, workers, housing, socioeconomic, education, and business. And you can also embed the My CD application on your website for users to use.

My Tribal Area is a tool that allows you to access statistics representing the entire population that lives on American Indian and Alaska Native areas. Featured - this features latest ACS 5-year estimate at the reservation and tribal area level. Users are able to utilize a type head search function and search by state or tribal areas. So this data features people, jobs, housing, economy, and education topics.

The OnTheMap for Emergency Management tool is a good resource to assist in evaluating the impact of a potentially affected area, or learn from the history of a disaster. OnTheMap for Emergency Management automatically incorporates real-time data, and these updates come from the National Weather Service and National Hurricane Center for hurricanes, floods, and winter storms; the Federal Emergency Management Agency, or FEMA, for disaster areas; the Department of Interior, and the Department of Agriculture for wildfires; and the Census Bureau for Demographic and Economic Data, which includes the American Community Survey.

Census Business Builder is designed for users needing data, and these could be potential customers, similar businesses, or consumer spending, to help start or grow a business, or to better understand an area's business landscape. There

are two editions of CBB, Census Business Builder. One is Small Business Edition, and the other is a Regional Analyst Edition.

The Small Business Edition was built primarily for small business owners who need easy access to information about potential customers and similar businesses. The Small Business Edition includes the following type of data: social, economic, housing and demographic data from the ACS, business data from the County Business Patterns, non-employer statistics, Economic Census and Survey of Business Owners, imports and exports data from the International Trade Program, consumer spending data from Esri, and farms data from the Census of Agriculture. That comes from the USDA.

The demographic and consumer spending data are available at the state, county, city or town, zip code and census tract levels. Economic data are available at the state, county and city/town levels. And agricultural and trade data are only available at the state level. Users of Census Business Builder can also upload their own data via an Excel file.

The other type of edition, the Regional Analyst Edition of the Census Business Builder, was built primarily for Chambers of Commerce regional planners and others who need a broad portrait of the people and businesses in their service area. It presents data for all sectors of the economy and for user-defined regions made up of one or more counties or cities or towns.

The Regional Analyst Edition includes the same interactive and customizable data dashboard, download options and map features as the Small Business Edition. So nearly the same map variables are also shown at the same geographic levels.

The TIGER/Line geodatabases bring together geography from the

TIGER/Line Shapefiles, and the ACS 5-year estimates. This is a great resource for data users who want to map our data. You can also check out our related training presentation, how to use ACS via database files and ArcMap from the ACS website for more information.

In keeping with our modern era of information on the go, the Census Bureau has created an Application Programming Interface, or the API, for developers to utilize publicly available detailed ACS data in the development of web or mobile apps. The API contains multiple datasets, as well as datasets from other censuses and programs at the Census Bureau. Formats available for these apps include HTML, JSON and XML. You can also check out our related training presentation using the Census API, The American Community Survey on the ACS website for more information.

Data.Census.gov is the Census Bureau's main data dissemination system, and will be the primary way to access data from the 2019 ACS Survey and more. The vision for the data.census.gov is based on overwhelming feedback to streamline the way that you get data and digital content from the Census Bureau.

Since 2016, we had made data.census.gov available as a public site, while continuously releasing new improvements every few months, based on user feedback. These updates will continue, as we are committed to giving you the functionality that you want and that you need in a dissemination system. So with that in mind, we encourage you to check out data.census.gov.

Start familiarizing yourself with the navigation that you will see with our 2019 ACS 1- year estimate release on September 17. And tell us how we can make your experience better by emailing cedsci.feedback@census.gov. You will see this email link when you go to data.census.gov, and it will be in the bottom

left-hand corner.

The Census Bureau is closely monitoring the current COVID-19 pandemic and offers demographic and economic resources through its COVID-19 site. Prior to the development of the hub, the Census Bureau was contacted by several federal agencies and others who needed data to help them plan their response efforts to the serious and rapidly developing situation.

The Census Bureau has a history of providing much-needed data for emergency planning, preparedness and recovery efforts. So we were ready to spring into action when we were contacted to help. We know there was a need for data on topics related to COVID-19 that only the Census Bureau could provide. So the ACS data is critical in providing data that gives insight into US communities for analysis and disaster planning purposes.

This was released on April 23rd, and it leverages Esri's ArcGIS platform to present selected data to inform recovery efforts. There is information available and downloadable databases and data layers that GIS specialists can integrate into their own maps and dashboards.

It features data on more than 30 demographic, socioeconomic and housing variables from the ACS, such as population 65 years and older, the total uninsured population, language spoken at home, race and Hispanic origin. It also features the number of businesses, employment and payroll that's provided from the County Business Patterns Survey. And there is data on self-employed people from the Non-Employer Statistics Program.

While we're talking about ways to access data through data tools. It's helpful to know about the types of data products available in the ACS. Broadly speaking, the data products are either profiles or tables. The letters in

parentheses next to the profile and table types, as you can see on this slide and the next, correspond to the beginning of the table ID. I will explain the table IDs in just a few moments.

So first, let's hone in on data profiles. Profiles offer a broad look at a community's social, economic, housing and demographic characteristics. They generally include many different variables, and the geography or population group is at the center. ACS includes the following types of profiles. The data profiles, which provide broad social, economic, housing demographic profiles.

There are the comparison profiles that offer comparisons of data profile estimates across ACS years, and the selected population profiles. These are profiles that provide broad social, economic, and housing profiles for a large number of race, ethnicity, ancestry and country or region of birth groups.

Tables are the other type of data products available in the ACS. Tables provide a precise or detailed view of a subject, and subject matter is at the center of the table. ACS includes the following types of tables. There are the detailed tables. We provide access to the most detailed of ACS data and cross-tabulations of ACS variables.

There's also the supplemental tables. These are simplified tables that provide ACS statistics at a lower population threshold than the standard 1-year data tables. Subject tables are similar to data profiles, but they include more detailed ACS data, and they are classified by a subject. There's also ranking tables which provide state rankings of estimated - of estimates across 86 key variables. So please note that at the moment, data.census.gov does not have the capability to support ranking tables. Ranking tables will only be available on the FTP site.

Geographic Comparison Tables - they compare geographic areas other than states. So these are comparing between counties or Congressional districts for example, for key variables. So now that you understand more about the types of data products that we offer, let's talk about how we number them. So while the characters of the table ID may look random at first, each table ID is purposefully numbered to describe its content and format. So for example, B06004APR shows that the table contains place and birth statistics for the White alone population in Puerto Rico.

Table IDs consist of up to five elements. So element 1 identifies the table type. In this example the type of table is the base table which is a type of details table. So therefore, the letter is B . Element 2 identifies the subject. So in this case, the subject of the table is place of birth which is 06. Element 3 is the sequential number, a set of two or three digits that uniquely identifies the table within a given subject. So in this case 004. Element 4 is the race iteration for the table. Each table is repeated for the nine major race and Hispanic or Latino groups. The A stands for White alone.

Element 5 is for tables where the contents of the table for Puerto Rico differs from the US table. A comparable US table ID will have the same first four elements but without the fifth element of PR. You can visit the URL at the bottom of the slide for a complete explanation of the table numbering system.

So now I want to take a few moments and show you a demonstration of a few ACS data tools. So I'm going to first start off with data.census.gov, and then I'm going to move over to Quickfacts and I'll show you the My Congressional District as well.

So starting here with data.census.gov, let's just say that we are going to be

looking for median housing value for all counties in California. So I'm going to start here at Advanced Search. And when I am pulling up all the different filters I like to start with geography. So here with geography we're looking at all counties in California. We'll go to County. We need to limit it to California. And then I will select all counties in California. Now I'm going to go over the topics. And if we are going to be checking out the housing value for all counties what we need to do is to go and click the housing, the financial characteristics, and housing value and purchase price.

When you make your selections make sure they pop up here at the bottom and then you can click search. Here you have a large number of different tables that are available for a quick click. You can also click View All Tables and you can scroll down here on the left to check out all the different options. And whatever you click on pops up on the right for a more expanded view. So I'm going to click here, Customize Table. And this is where - that you can go and customize whether you want it for 1-year or 5-year; change your geographies or the year that you're looking at; transpose the table; and you can also download the table.

So about download, if you click here you can choose the data years of download that you want and download is a Zip file. And this year downloads is a machine-readable file. So this will be great for SAS, R or what have you. But if you are trying to get an Excel look that makes it user-friendly, similar to what you're seeing on the screen, right-click anywhere on the table and export table and export to Excel. And then this will give you a very similar view of what you see here.

Okay so next, now we're going to look at Quickfacts. So if we're looking for commuting times by place within a state, I'm going to start here and I'm just going to say all right let's say we're going to be looking for Denver. So place

is cities or towns. So I see Denver City, Colorado. That's what I want. And we have here all of the different information and data here. But if I want to narrow it down and kind of have it at the top, I'm going to select a fact, scroll down a little bit until I find transportation. And here we go. We can see that 25.4 minutes is the mean travel time to work or commuting.

The one thing that's really nice about Quickfacts is I can go and check out a dashboard. I'm going to click here and choose Denver City, Colorado and this will pull up all the estimates that you saw a little bit earlier. But whichever you click and it's still loading, okay here we go, so whichever you click, right now it's doing the commuting times, it will bring up a map but also compare with the map of the different areas. And I can scroll down and check out where it's compared to all of the different areas that's around the geography that we selected.

So then if I'm going to look at Congressional District data and I want to use My CD, here I can find many different people, workers, housing, socioeconomic, education, and business data. So if I want income data for a particular Congressional District, I'm going to first select my state. So let's say we're going to go for Georgia and we are wanting to look at Congressional District 4. I'm going to let this load a little bit, and then click socioeconomic. And here we can see that for income data we have the median household income in dollars is \$58,448 for Congressional District 4, in Georgia.

So now let's talk about a variety of resources that the Census Bureau provides for learning more about our data tools and about the survey at large. So first we have the ACS main page, which is a great tool to start if you have questions about the ACS. This page can be found by going to [census.gov](https://www.census.gov), selecting surveys/programs and then selecting ACS. You can also just simply go to [census.gov/acs](https://www.census.gov/acs). You may be curious as to why we asked particular

questions on the ACS. So every question has a required purpose and many uses to help the communities. Explore the set of interactive Why We Ask web pages to discover the importance of each question. These pages can be accessed by selecting the Why Do We Ask Each Question feature.

Our Data Tables and Tools page will introduce you to the most popular tools and data products with descriptions and links for each. The Comparison Guidance page provides broad information about comparing ACS estimates across years with Census 2000 and with 2010 Census. So from the left navigation you can find that I've outlined in red, you can find yearly guidance on the comparison of data sets as well as specific topics and subjects. So for example, if you're interested in data about a computer and Internet use from 2016, you would select the year and then select the topic, Computer and Internet Use. From here you could then see that the Census Bureau recommends comparing the 2016 data and 2015 data with caution due to question wording changes.

As I mentioned at the beginning of this presentation, the ACS provides estimates and that in itself is the strength of the American Community Survey: estimating characteristic distributions. The Census Bureau recommends that users compare population characteristics such as percent, means, medians, and rates rather than estimates of population totals. Now if you are looking for population totals we recommend using the decennial census or the Population Estimates Program.

In general, the Census Bureau recommends that you do compare estimates from non-overlapping periods. So for example, compare a 2008-2012 ACS 5-year estimates to a 2013-2017 ACS 5-year estimate. Don't compare overlapping periods. So, if you're looking at 2012-2016 ACS 5-year estimates don't overlap and compare with the 2013-2017 ACS 5-year estimates.

Definitely do compare similar period lanes. For example, 1-year to 1-year. But don't compare 1-year to 5-year. It is also important to keep in mind that all ACS data are estimates.

We collect data from a sample of the population in the United States and Puerto Rico rather than from the whole population. So to help you interpret the reliability of the estimates, the Census Bureau publishes a margin of error for every ACS estimate. So unless you take into account the margins of errors you cannot conclude that estimates are statistically different from one another. Instead, you have to conduct statistical testing when making comparisons between estimates to check for any differences. I'll talk about that in just an upcoming slide.

But looking at estimates alone to decide if they are higher or lower than one another is not sufficient. So as I brought up margin of error referred to as MOE in the previous slide, I now want to discuss MOEs and their importance. So margins of error allows data users to be certain that at a given level of confidence the estimate and the actual population value differ by no more than the value of the MOE. The Census Bureau uses 90% confidence level as its standard. All ACS estimates published on [Data.Census.gov](https://data.census.gov), have margins of error calculated at the 90% confidence level. It's also important to note that the MOEs provided by the Census Bureau, are always in the same units as their respective estimates.

So for instance, a percent estimate will have a percent MOE and a median income estimate will have MOE in dollars. So here we have a typical table, detailed table B01001, which is Sex by Age as it is displayed on data.census.gov, for the state of Wyoming. So as you can see, the table has three elements - the characteristics which are the descriptions like total male under five years; the estimates; and the accompanying margins of error. These

are all outlined in red here. Put simply, the margin of error or MOE, is a measure of the possible variation of an estimate around the population value.

So in this example, we want to know how many males under age five, live in Wyoming. We find the upper bound by subtracting the margin of error from the estimate. Similarly, we find the upper bound by adding the estimate and margin of error. So we are 90% confident that the true number of males under five in Wyoming falls between the lower bound of 18,356 and the upper bound of 19,721. So now let's discuss statistical testing and it's important. Statistical testing is an important part of data analysis as it can tell us whether or not a difference in estimates is meaningful. So in short, a statistical test is a test to determine if a difference is unlikely to have occurred by chance.

To be statistically different there must be statistical evidence that there is a difference between the two estimates. Statistical testing should be conducted any time you make a comparison between two estimates. So now that you have this background, you can start to see why making accurate comparisons matter. So for example, if you're going to the city or county council asserting that a certain population has experienced poverty in higher proportions in recent years than it had in the several years before, you want to make sure that you test it to know that a true difference actually exists.

So the good news is you can test for statistical distance - statistical significance using math or more specifically, algebra. And so then this slide contains the formula for testing for statistical significance. Now the good news is that you don't need to worry about re-learning advanced algebra because the Census Bureau released its statistical testing tool for public use. This tool allows you to input estimates that you'd like to test and receive a visual notification of whether the estimates are statistically different or not. Using the tool, you can compare both pairs of estimates and groups of

estimates against each other. The tool is available for download as an Excel spreadsheet via the link at the bottom of the slide.

So moving on, for users that have access to data but need to understand more information about the tables and complete their analysis, we offer code lists, subject definitions, group quarters definitions, instructions for applying statistical testing, and more, in our technical documentation section. So the technical documentation page as shown in this slide, can be found at the [census.gov/acs](https://www.census.gov/acs), and then selecting technical documentation on the left-hand side. Finally, from the terms of the American Community Survey to Zip Code Tabulation Area, for (ZCTA), the Census Bureau glossary is a great resource to learn about more of the terms that you see on our Web site.

So while you're browsing Census data you are unfamiliar with the term and its meaning, follow the link at the bottom of this slide and search for those terms. As I begin to wrap up today's webinar, we invite you to stay in touch by telling us how you use data from the American Community Survey. So for example, have you or your organization used the ACS to make an important decision; help your community; or perhaps expand your business? If so, please visit the link at the bottom of the slide to share your story and explore how data enthusiasts across the country are using ACS data in creative ways.

By doing so provides further support for the importance of the data that we collect here at the Census Bureau, and is a great way to further promote our data. We have recently published two new data stories in fact. Check out the bottom link on the screen to discover how San Francisco University High School uses ACS data to engage high school statistics students. And also learn how the St. Joseph Community Health Foundation in Indiana uses ACS data to put its dollars to work in the areas of greatest need.

I want to inform you that there's a group specifically for users of ACS data known as the ACS Data Users Group. The purpose of the ACS Data Users Group is to improve understanding of the value and utility of ACS data as well as to promote information sharing among data users about the key ACS data issues and applications. You can learn more at acsdatacommunity.prb.org, and learn how to join from there. Membership is free and open to all interested ACS data users.

If you're looking for further assistance on how to obtain or understand ACS data, our data dissemination specialists are located within your region and they can provide you with assistance about Census Bureau data. These specialists usually provide help in English but sometimes in other languages as well, depending on the needs of their communities. So whether conducting one-on-one webinars with business start-ups or conducting large scale presentations at universities, these specialists strive to put the public in touch with the data that they need. This service is assistance for free. So if you have interest in a specific type of training or presentation, please reach out to a specialist in your area, using the contact information on this slide.

In closing, I encourage you to connect with us directly. You can sign up for and manage alerts on the ACS, via the GovDelivery. You can also add yourself to GovDelivery if you want the slides from this presentation or any other presentations that we provide. And GovDelivery will send out a broadcast when materials are then available. You can visit our Web site at census.gov/acs and follow our social media platforms using the hashtag #ACSdata. If you need support for data questions feel free to reach out to us at acso.users.support@census.gov.

And be aware that we will be conducting our 2019 ACS 1-year pre-release webinar on September 10th. Be on the lookout for that next month. And one

last thing before I open the line for questions, if you're using ACS estimates make sure to source the Census Bureau and American Community Survey as to where you received the data. It helps people know the information they're using is powered by the American Community Survey.

So, this concludes today's webinar and the introduction to the American Community Survey. We want to thank you for attending and having an interest about the important data of the Census Bureau and what it collects. I will now open the floor for any questions. Operator, do we have any questions on the line?

Coordinator: Thank you. If you would like to ask a question you may do so by pressing star 1, unmute your line, and record your name clearly. Your name is required to introduce your question. If you need to withdraw your question, you may do so by pressing star 2. Again, if you would like to ask a question please press star 1 and record your name clearly. It does take a moment or two for questions that come through. And we do have some questions in queue. First question in queue, your line is now open.

(Caller 1): ...you track disability status if visual impairment is separate from hearing impairment or other forms of impairment? I don't - we didn't address that in this call.

Caleb Hople: Hi, yes, thank you for your question. So we do have different types of disability status available in our detailed tables. If you would be so kind to reach out to us at the email provided on the screen, acso.users.support, I'll be able to from there, relate you towards those different types of tables. I can send you those links in data.census.gov.

(Caller 1): Great. Thank you.

Caleb Hopler: No problem. Thank you.

Coordinator: Thank you. The next question in queue, your line is now open.

(Caller 2): Yes. Good afternoon. I'm curious as like how do you become an American Community Survey interviewer? What is that position called? And how much training is involved for that role or that particular job title?

(Gretchen): Hey, this is Caleb's colleague Gretchen, and I'll take that question. The people who do interviewing are called field representatives. And if you want to email us, I think we can put you in contact if they have any open positions.

(Caller 2): Okay. Great. Thank you.

Coordinator: The next question in queue, your line is now open.

(Caller 3): Yes, I'm interested in working with the American Community Survey. I've already completed and sent in an application about two months ago. How do I get into that? I haven't heard anything.

(Gretchen): Hi. This is Gretchen again. So we're not able to address the employment questions really, in this question. You're welcome to email us and we can try to direct you to the right area, but we won't know the status of employment applications or whatnot.

(Caller 3): Okay.

Coordinator: The next question in queue, the name was not recorded clearly, but your line is open. They got disconnected. One moment. The next question in queue the

name also was not recorded. Your line is now open. If you queued in for a question your line is now open. Sir, your line is now open. Hi, your line is open. Sir, your line is now open.

(Caller 4): Do you collect immigration data?

Caleb Hopler: I'm sorry, what was your question? Do we collect immigration data? Is that what you asked?

Caller 4: Yes.

Caleb Hopler: For official immigration data, I would actually refer you to USCIS data sets and that is with the Department of Homeland Security. So we don't actually collect data on immigration.

Caller 4: Thank you.

Coordinator: Okay. The next question in queue, your line is now open.

(Caller 5): Hello. I am a field representative and very appreciative to see you going over some of these things. Is there any way that something could be put on my computer screen that I could show a respondent at their door? And asking for miracles in 30 seconds, I could tap, tap, tap, and show them something that would help me convince them to participate without going into statistical analysis. We have about one minute at a person's door to make or break it. Thank you.

(Gretchen): Hi this is Gretchen again. You're welcome to reach out to us. But I think you would probably also want to reach out to your supervisors and kind of relay that feedback back to headquarters.

(Caller 5): I'm sorry?

(Gretchen): I said you'd probably want to share that feedback with your supervisors and they can send that back up to headquarters. That's probably a little outside of the scope of what we can answer here. But thank you for joining.

(Caller 5): You're welcome.

Coordinator: Thank you. The next question in queue, your line is now open.

(Caller 6): Hi. I just have some information regarding veterans data. Long ago the ACS - it makes it really difficult. I know there's a lot of clicking involved. Got that. But I just wanted to know if the age range is easily found as far as veterans. Is there like a certain age range that you guys are going for in vet data or just veteran information in general?

Caleb Hopler: Are you asking in terms of how we collect this data?

(Caller 6): Right. If - or how it's displayed in here. Because I haven't really had an opportunity to go delve into - it's very expansive and thank you for that. But sometimes it's kind of hard to find the data because I try to find it by county and then it says veterans and then says age between, and I didn't know if you guys collected the data based on age or just the veterans' status or both.

Caleb Hopler: Yes. So, thank you for your question. So I have a couple of different answers for you. So in the...

(Caller 6): Okay.

Caleb Hopler: ...way that our data is collected, this is all based on the responses from the respondents.

(Caller 6): Okay.

Caleb Hopler: So we don't necessarily make the decisions based off - on how to calculate the data based off of what we think. No. It's more of what the...

(Caller 6): What's been volunteered? Got you. Okay.

Caleb Hopler: And so from there, when we actually have the data and we are putting the data together we may have them available in different age ranges depending on the data table. I would recommend taking a look at data.census.gov and when you go to the advanced search you can click on topics and select veterans status.

(Caller 6): Perfect.

(Gretchen): This is (Gretchen). We just put a - I just put a link in the chat to the veterans' table and it looks like the universe is 18 and over.

(Caller 6): Okay. I'm going to copy that and put it somewhere so I can take a better look at it. Thank you so much. I appreciate that.

Coordinator: The next question in queue - the name was not recorded but your line is open. If you queued in for a question and did not record your name, your line is now open.

Caller 7: Okay. That might have been me. Can you hear me?

Coordinator: Yes.

Caller 7: Okay. Perfect. Oh, hi there. Thank you so much for this presentation. It's very, very, very helpful and insightful. In regards to collecting the data and specifically, with the business and economic data, when this - when the data is collected, let's say for example, when business entities are surveyed, and let's say the business owners - if they - their - Spanish is their native language, is this survey or the questionnaire, is it available to them in Spanish or only in English?

Caleb Hopler: Yes. Thank you. So first of all, for business information, so ACS is only at the household level. So this will not be at the business level. But that said...

Caller 7: Got it.

Caleb Hopler: ...the ACS is available. We do have other languages available that they can either call in for a translation or request different copies in their language.

Caller 7: Okay. For the business data, the gathered, who would be a good source of contact to reach out to for that question?

Caleb Hopler: Sure. So if you would write us at the acso.users.support, I would be more than happy to send you over to our best contacts.

Caller 7: Awesome. Thank you so much. I appreciate it.

Caleb Hopler: No problem. Thank you.

Coordinator: Thank you. The next question...

(Caller 8): Yes, thanks. So I'm at a university. We're using several different variables

from the ACS data out in the Midwest, to do some financial modeling. We're using it for affordability at small communities or whether they could afford the utilities. I had sent a question in earlier or whatever. So we're noticing dip - some large spikes in the data at the yearly level. How often would a small - would a person in a small community in the Midwest, be sampled. Are - is each community being sampled each year or, I'm assuming no, but...

Caleb Hopler: No. Correct. So, thank you for that question. So again this is at the household level. So it's the address that's being selected to respond to. It's not an actual name that's selected. So therefore, a particular household can only be selected once every five years.

(Caller 8): And would a community - are you hitting each community? Like we have 900 cities in Kansas, I think it is. Is each city getting sampled or I'm assuming it's random, but...

(Gretchen): So this is (Gretchen). ACS is representative of all the communities. But I think that would be a good question to follow up with user support and we can get you in touch with our - that staff.

(Caller 8): All right. Thank you.

Coordinator: Thank you. Our next question, your line is now open.

(Caller 9): Hi. I have like two questions that are kind of related. The previous gentleman asked how households are selected and I'm a field representative and we're always told that they're statistically selected. And then do different surveys cross-reference each other? Because I've encountered people that are being surveyed for Housing and American Community at the same exact time.

(Gretchen): So this is (Gretchen) again. So I think it is possible that a household could be sampled for more than one Census Bureau survey. I think that is possible.

(Caller 9): What's the computation or whatever that statistically selects a household?

(Gretchen): So we use what's called a master address file to select our sample. But as far as how it works for all the other surveys, I'm not quite clear on that.

(Caller 9): So like...

(Amanda): Hey everyone. So this is (Amanda). I am (Gretchen)'s and Caleb's colleague in the American Community Survey Office. As (Gretchen) mentioned, you can - if you want really detailed information on how we - how ACSO - you know, creates the sample frame, that is something we can provide - that we do provide at a high level. And you can always look at census.gov/acs. We have a lot of information on our Web site. And under the methodology section, we have a design and methodology report. And so again, that's census.gov/acs and it's under methodology. And there's a design and methodology report that will have very detailed information about sample creations and so on and so forth.

And if you still have questions, again you can reach out to us at acso.users.support@census.gov. And if you missed that, it's in the PowerPoint and in the chat a couple of times too.

(Caller 9): I guess it's kind of frustrating on the people's perspective when they're asking - because questions are quite similar from survey to survey. And it's frustrating for the people that are being included in the sample to be on multiple surveys answering the same exact question over and over. Hello?

Caleb Hopler: Yes. Thank you for that feedback. We do have an area at the Census Bureau that is consistently - constantly looking at this for response burden. So I do know that we do have areas here that are looking into this to constantly make it better and more easier and less of a burden for respondents. So thank you for that feedback.

Amanda: If you're interested, we also have a - Census Bureau does have a respondent advocate that respondents can reach out to with this feedback. And so information on the respondent advocate can be found on the Census Bureau Web site. Thanks.

(Caller 9): Oh, okay. Okay. Thank you. All right. Thank you.

Coordinator: Thank you. The next question...

Caleb Hopler: Thank you.

Coordinator: ...the name was not recorded. If you queued in for a question your line is now open.

(Caller 10): Can you guys hear me?

Coordinator: Yes.

Caleb Hopler: Yes, we can.

(Caller 10): Oh, cool. Can you sort census data by aldermanic districts?

Caleb Hopler: I did not hear your question. Can you ask that again?

(Caller 10): Sure. Can you sort data by aldermanic districts? Like I know you can do it by like the block, etc. But I work in city government and we have to struggle pretty hard to - trying to estimate that. Is there a way within like the data on why - that you can sort by aldermanic districts within the city?

(Gretchen): This is (Gretchen). I don't think we're familiar with the geography that you're mentioning. I'm not sure if that's maybe specific to your communities, but you can email us and we can reach out to our geography colleagues.

(Caller 10): Okay. Is there an email available or should I just email the one that's available on the last slide, or...

(Gretchen): Yes. The one on the screen.

(Caller 10): Okay. Thank you.

(Gretchen): Yes. Just send it to user support.

(Caller 10): Thank you.

Coordinator: Thank you. The next question in queue, your line is now open.

(Caller 11): Yes. Good morning and thank you. When at - I'm on the Census Business Builder and it - I'm wondering, what is the - is the threshold I'm presuming for respondents to some various questions such that when I zero in to say particular zip codes or even Census tracts, I get a "none available" or "suppressed information." And I am in a rural county here, so I'd just like to know the general guidelines for how small a sample gets before you decide to suppress it. That will help in - just in filtering information.

(Gretchen): This is (Gretchen). Census Business Builder has to have a mix of both American Community Survey data and then also some of our business and Econ surveys. So I'm not sure if what you're seeing is because of the threshold for those other surveys. The ACS does go down to small geographies like tracts and block groups. So it may be a limitation for the other surveys in there.

(Caller 11): So I might have better luck on data.census.gov?

(Gretchen): If you're looking for small geographies, ACS does go down to the tract and block group level and that would be available on data.census.gov.

(Caller 11): Very good. That's helpful. Thank you.

Coordinator: Thank you. As a reminder, if you would like to ask a question you may do so by pressing star 1, unmuting your line and recording your name clearly. Your name is required to introduce your question. If you need to withdraw your question, you may do so by pressing star 2. We have another question in queue...

(Caller 12): Hello. Thank you again. In relation to the veterans and their ages, I was a little bit confused by the question and the answer. One of the first questions on the survey is their birthday and their age and later if they say they're a veteran, how would you not be able to create age brackets for veterans? I'm confused. Thank you.

(Charles): How are you doing, sir? My name is (Charles). I'm a colleague of (Caleb). So the data is based on 18 years and above but the tables are broken out in age range. I have a table in front of me now and it has 18-34, 35-54, 55-64, and so on and so forth. So those tables are broken out in different age ranges.

(Caller 12): Okay. Thank you.

(Charles): Not a problem. Thank you.

Coordinator: Thank you. The next question in queue, the name was not recorded. If you queued in for a question your line is now open.

(Caller 13): Can you hear me?

Caleb Hopler: Yes, we can.

(Caller 13): Hi. Finally. Well, thank you for the presentation. I'm referencing the Kaiser Family Foundation study that was recent, that use your data to speak to a number of senior citizens living with school-aged children. The report itself was related to COVID. I had been looking at some 2010 Census data that also looked at senior citizens living with children. But it focused on those where the seniors were in charge of the home. So they were - they were the homeowners and the caretakers.

I'm wondering- the data looks different between obviously ten years ago and closer to today. But is there a disconnect between the actual elements that you're looking at between the two surveys. Or if - can I find the detail about its householders or I forget how they call them in the census.

(Gretchen): This is Gretchen. So in ACS we collect what we call grandparents as caregivers. So those are grandparents who have grandchildren living with them. It may be defined a little bit differently with Census. I'm not sure off the top of my head but you can always send that into our email address and we can take a look.

(Caller 13): Okay. Thank you.

Coordinator: Thank you. The next question in queue, your line is now open.

(Caller 14): Oh, hi. Hi. Well, it was kind of answered but I'll follow up. In constructing the 5-year intervals, you do that because for any given year there's not a big enough sample, correct?

Gretchen: So we collect data every year and then to get down to smaller geographies we do combine the five years of data to create those smaller estimates.

(Caller 14): So, and (Charles) said that for every year between 2010 and 2018 is a five-year data set. Does that mean for the year 2018, and that's including data from '19 and '20?

Gretchen: No. So we would have data from 2010 to '14, '11 to '15, '12 to '16, etc.

(Caller 14): Ending in 2018?

Gretchen: Yes. So 2018 would be the end year. So that will be what comes out for...

(Caller 14): So the latest five-year interval would be 2014 to 2018?

Gretchen: Yes. And that came out last...

(Caller 14): And then - but what about before 2010?

Gretchen: Yes. We have the first 5-year release we had was the 2005-2009.

(Caller 14): Okay. And why can't you compare overlapping estimates?

Gretchen: Because they have - if you had like a '05 through '09 and '10 through '14 then four of the years would be the same with those data sets. So we usually recommend comparing the non-overlapping estimates.

(Caller 14): What about comparing - I'm sorry for this. What about comparing two estimates with only one year overlapping?

Gretchen: I think it just kind of depends on what you're doing and what you're trying to accomplish. Our general guidance is to use non-overlapping.

(Caller 14): Okay. Thank you.

Coordinator: There are no questions in queue.

Gretchen: And Operator...

Coordinator: There are no questions...

Caleb Hopler: Are there any more questions at this time?

Coordinator: There are no questions in queue at this moment. As a reminder, if you would like to ask a question you may do so by pressing star 1. Thank you. You have a question ...

(Caller 15): Hi. Thank you very much. A follow-up question - I'm the person who asked about grandparents as caregivers. I'm having difficulty finding that information on the report section. Am I in the wrong - can you go over again how to sort and focus in on data elements? Would I go to the...

Gretchen: I'll add a link to the chat to that - to the grandparent data for you.

(Caller 15): Oh, thank you. Thank you so much.

Coordinator: There are no questions in queue at this moment.

Caleb Hopler: Okay. Well, that concludes today's webinar. And I thank you very much for attending. The slides will be available momentarily - soon. And it could take a couple of business days. So if you are wanting to log into - here let me go back to here to sign up and manage alerts for GovDelivery, you should be able to see the notification for when the slides are available. Thank you for joining today.